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ACTA ZOOLOGICA SINICA

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TITLE: "Studies on the Inducing Efficiency of Sandai Virus on Cell Fusion"

SOURCE: Peking TUNG-WU HSUEH-PAO [ACTA ZOOLOGICA SINICA] Vol 23, No 1,
Mar 77 pp 4-13

TEXT OF ENGLISH ABSTRACT: Walker 256, the undifferentiated adenoma-carcinoma cells of rat, and the erythrocytes of rooster were used for studying of the inducing efficiency of Sandai virus on cell fusion. The relationships between the inducing efficiency of Sandai virus and the allantoic fluid of chick embryo, the hemagglutinin titer unit (HAU) of virus, various dilutions of virus suspension, time of culture of virus in chick embryo, distribution of virus particles in different density gradient fractions, and different virus seeds have been investigated. The influence of different cell systems on the inducing efficiency of Sandai virus has also been compared. It has been suggested that the fusion factor presents in the virus particles per se, and not in the allantoic fluid. From the standpoint of cell fusion, the progeny produced from the same virus seed has been considered to be heterogeneous,

[continuation of TUNG-WU HSUEH-PAO Vol 23, No 1, Mar 77 pp 4-13]

one with high inducing efficiency and another with low inducing efficiency. HAU has been shown not to be correlated to the quantities of the virus particles with different inducing efficiency, hence not directly related to the fusion efficiency of the virus. The duration of culture of virus in chick embryo and the quality of virus seed has been observed to influence the fusion efficiency of the virus progeny. The dilution of virus suspension and various cell systems has been shown to affect the virus fusion efficiency relatively.

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Science

TITLE: "A Preliminary Investigation on Artificial Feeding of the Adult
Mussels of *Mytilus Viridis*"

SOURCE: Peking TUNG-WU HSUEH-PAO [ACTA ZOOLOGICA SINICA] Vol 23, No 1,
Mar 77 pp 14-21

TEXT OF ENGLISH ABSTRACT: Some results have been observed on feeding artificially
the adult mussels of *Mytilus viridis* in laboratory.

With regard to the relation between feeds and growth, it is found that by using
sweet potato-starch as feeds, the density of starch may reach as high as
0.100 g/l without inducing any harmful consequences such as the closing of
shells, the stopping of water filtration, or the impediments of feeding, etc.

[continuation of TUNG-WU HSUEH-PAO Vol 23, No 1, Mar 77 pp 14-21]

A density of 0.022-0.025 g/l is, however, preferable; an excess of that brings
about a large quantity of pseudo-feces to the extravagance of feeds. It is
further noticed that from July to September inclusive, i.e., during the in-
termittent period between two stages of natural breeding, an alternate feeding
of sweet potato powder with *Platymonas* solution may take one hour to one and a
half to complete digestion from intake to excrement. Full stomachs differ
little from empty ones, as far as time is concerned, because the mussels (*M.*
viridis) work incessantly through water filtering, feeding, to excreting.

According to the feeding habits of *M. viridis*, it is advisable to feed the
mussels mainly with sweet potato-starch plus a small quantity of *Platymonas*,
so that the individual mussels may maintain their own weight, or even gain
a little bit. It is of greater significance that the generative gonads are
so well developed that a slight increase in water temperature within a short
time of sun-shining will guarantee at least 50%, and in most cases 100%, of
the mussels to spawn. The rate of fertility may reach 100%, and that of
incubation 95%. The development of the mussel larvae is well-balanced, as
their growth is fast.

[continuation of TUNG-WU HSUEH-PAO Vol 23, No 1, Mar 77 pp 41-21]

It is worth mentioning that the artificial feeding of *M. viridis* is practiced at a time from July to September, when no natural breeding is possible on account of the void gonads of the adults. Since the artificial feeding has actually resulted in normal development of eggs and spats of their mussels in the Haifeng Marine Aquacultural Station, Guangdong (Kwongtung), it is furnished in fact an additional stage of breeding by artificial means.

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TITLE: "Preliminary Experiments on the Artificial Breeding and Fry Rearing of Gizzardshads *Clupanodon punctatus* (Temminck and Schlegel)"

SOURCE: Peking TUNG-WU HSUEH-PAO [ACTA ZOOLOGICA SINICA] Vol 23, No 1, Mar 77 pp 22-29

TEXT OF ENGLISH ABSTRACT: This report is a preliminary summary of the artificial breeding and fry rearing of Gizzardshad, *Clupanodon punctatus* (Temmick and Schlegel), being carried out by Shandong Fisheries School during open-door schooling at Rushan county in Shandong province.

[continuation of TUNG-WU HSUEH-PAO Vol 23, No 1, Mar 77 pp 22-29]

1. The artificial breeding of Gizzardshad

On May 17 p.m., 1975, 20,000 fertilized eggs were obtained by the dry method. Within 51-52 hr. after fertilization, more than 5,000 larvae of Gizzardshad were incubated at temperature between 15.5° and 18°C.

2. The fry rearing of Gizzardshad

We got the brood hatched fries on 20 May. Their total length was 4-4.4 mm. After being cultured for two days the ciliates inundated and thereafter a lot of fries died out. On May 24 (at the 4th day after incubating) they entered into the latest larvae phase with total length 5.5-6.5 mm. They were then reared in running water. In this stage they were fed with sauce dregs--yeast, oyster larvae, copepoda and their larvae, and nauplius of *Artemia salina* one after another. On June 16 (at the 27th day after incubating), the fries entered into young phase with total length averaging 22 mm. The fries grew rapidly, while we kept on feeding them with copepoda and larvae of *Artemia salina*. On June 25 (at the 35th day after incubating) they entered into juvenile phase, at that time we had 703 fries with total length averaging 36 mm and body length averaging 30 mm. Then we set them into the pond with prawns *Penaeus orientalis* for polyculture.

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TITLE: "On the Foods of Abalones--A Preliminary Report on the Culture of Benthic Diatoms"* 1

SOURCE: Peking TUNG-WU HSUEH-PAO [ACTA ZOOLOGICA SINICA] Vol 23, No 1, Mar 77 pp 47-53

TEXT OF ENGLISH ABSTRACT: This report presents the method of culturing benthic diatoms, used for feeding abalone larvae. During the season of abalone larva culture, the common benthic diatom species were collected in the coastal area of Dongshan County, Fujian Province. After the settlement of benthic diatoms

* Contribution No 358 from the Institute of Oceanology, Chinese Academy of Science.

1. Report from the Laboratory of Abalone and Pearl-Oyster Culture Tung-shan, Fukien

[continuation of TUNG-WU HSUEH-PAO Vol 23, No 1, Mar 77 pp 47-53]

on the glass plate and the polyvinyl plastic film, the algae were cultured on a large serge scale. The culture condition such as temperature, light, nutrients, quality of water, and predator were examined. Diatoms could be harvested after a week of culturing, i.e. the diatoms were washed down from the glass plates or transferred the whole glass plates into the culture pond of abalone larvae. The diatoms were used for feeding the abalone larvae and also for examining the effect of feeding. Comparison was made of the feeding of benthic diatoms with that of *Plalymonas* sp., showing that in the former the quantity of food taken was greater (1.5 time) and the growth rate higher (1.6 time).

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TITLE: "Studies on the Distribution of Baiji, *Lipotes Vexillifer* Miller"

SOURCE: Peking TUNG-WU HSUEH-PAO [ACTA ZOOLOGICA SINICA] Vol 23, No 1,
Mar 77 pp 72-79

TEXT OF ENGLISH ABSTRACT: Baiji was recognized as early as 2,000 years ago. It was named Ji or Baiji in the classical works. The name Baiji has been used generation after generation by the working classes even till now.

Based on twelve specimens (7♀♀, 5♂♂) collected from the Chang Jiang near Nanjing and materials reported by several authors, the characteristics of this curious dolphin are described in detail and indicated by the photographs in plates I-II, with measurements given in tables 1 and 2.

The life of the Baiji is briefly discussed.

[continuation of YUNH-WU HSUEH-PAO Vol 23, No 1, Mar 77 pp 72-79]

Contrary to the opinion of Hoy (1923), we consider that Baiji is a fluviatile and estuarine odontocete, inhabiting chiefly the middle and lower reaches and also the estuary of Chang Jiang (Fig. 1; Tab. 3). During high water, it has been also found in Dongting Hu and Qiantang Jiang. About 40 years ago, it was captured near Huang Ling Miao and Lian Tuo in the famous Sanxia about 1,900 km up the Chang Jiang. Following the social and economical development of our country and under the influence of the constructive activities of our people, the areal of Baiji in Chang Jiang and Qiantang Jiang is now becoming much restricted.

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TITLE: "Three New Species of the Umbelleaf-Shaped Echinostomes, Subgenus Petasiger (Petasiger) (Family Echinostomatidae) From Some Chinese Birds"

SOURCE: Peking TUNG-WU HSUEH-PAO [ACTA ZOOLOGICA SINICA] Vol 23, No 1,
Mar 77 pp 80-87

TEXT OF ENGLISH ABSTRACT: During our work on the specimens belonging to the family Echinostomatidae, three species of genus Petasiger were found to be new to science. The types and paratypes of the new species are deposited in the Peking Institute of Zoology, Academia Sinica.

Petasiger (Petasiger) laricola sp nov. (fig. 1,2)

Body umbelleaf-shaped, 1.196-1.407 mm x 0.486-0.510 mm and spiny, 0.015 x 0.04 mm. Head collar reniform, 0.200-0.214 mm in width with 19 collar spines in a

[continuation of TUNG-WU HSUEH-PAO Vol 23, No 1, Mar 77 pp 80-87]

single continuous row; corner spines 4 on each side, 0.050-0.064 x 0.014 mm, and others 0.036-0.044 x 0.007 mm. Oral sucker terminal, circular, 0.111-0.114 x 0.100 mm. Acetabulum nearly circular, lying in center of body, 0.243-0.257 x 0.257 mm. Prepharynx distinct, 0.021-0.057 mm. Pharynx oblong, 0.071-0.100 x 0.064-0.071 mm. Oesophagus long, 0.071-0.114 mm. Intestinal caeca extending near posterior extremity of body.

Testes tandem, situated in posterior half of body, transversely in position, arranged mostly as three balls combined in a row and with few indentations; anterior one 0.114-0.143 x 0.200-0.229 mm. while posterior one 0.129-0.171 x 0.229-0.259 mm. Cirrus pouch locates in front of acetabulum, 0.129-0.157 x 0.086-0.114 mm enclosing internal seminal vesicle and pars prostatica, and its posterior edge extending to anterior edge of acetabulum. Genital pore between acetabulum and intestinal bifurcation.

Ovary lying on the right side between anterior testes and acetabulum, globular and smooth, 0.093-0.100 x 0.086-0.100 mm. Mehlis' gland left to ovary, 0.100-0.129 x 0.057-0.071 mm. Vitellaria follicular, extending from the level of anterior border of acetabulum near the posterior extremity of body, and uniting from both sides behind testes. Uterus short. Eggs few, thinshelled, ovoid, 0.069-0.073 x 0.040-0.047 mm.

[continuation of TUNG-WU HSUEH-PAO Vol 23, No 1, Mar 77 pp 80-87]

Host: Laughing gull, *Larus ridibundus* Linnaeus.
Locality: Small intestine.
Location: Tianjin, China.
Date: October 2, 1957

This species closely resembles *Petasiger* (*Petasiger*) *lobatus* Yamaguti, 1933 in the shape of the testes, but is distinguished from Yamaguti's specimens by: (1) testes comparably flattened with more indentations, (2) the posterior testis distinctly larger than that of the anterior one and (3) small-sized egg, 0.069-0.073 x 0.040-0.047 mm.

Petasiger (*Petasiger*) *soochowensis* sp. nov. (fig. 5,6)

Body umbel-leaf-shaped, 1.500-0.714 x 0.457-0.543 mm at the level of the anterior testis. Cuticle spiny in front of acetabulum, spines 0.013 x 0.0036 mm in size. Head collar reniform, 0.271-0.286 mm in width, with a single row of 23 spines, corner spines 3 on each side, 0.040-0.051 x 0.011 mm and others 0.044-0.058 x 0.011-0.013 mm. Oral sucker small, terminal and circular, 0.086 mm in diameter. Acetabulum oval in outline, lying behind the posterior half of body, 0.186-0.229 x 0.186-0.214 mm. Prepharynx short, 0.0057 mm in length. Pharynx oval,

[continuation of TUNG-WU HSUEH-PAO Vol 23, No 1, Mar 77 pp 80-87]

larger than oral sucker, 0.114-0.129 x 0.071 mm. Oesophagus 0.214-0.229 mm. Intestinal caeca ending near the posterior extremity of body.

Testes two, tandem, situated in anterior border of posterior half of body, anterior testis transversely oval shaped, 0.114-0.129 x 0.257-0.271 mm, posterior one transversely oblong to inversely triangular, 0.157-0.186 x 0.200-0.214 mm. Cirrus pouch anterior of acetabulum, oval, 0.157-0.186 x 0.200-0.214 mm, extending over center of acetabulum and enclosing gourd-shaped bipartite internal seminal vesicle in left half and pars prostatica in posterior right and ejacutory duct in anterior of right of cirrus pouch.

Ovary located between anterior testis and acetabulum, smooth dorsal to posterior portion of acetabulum, transversely oblong, 0.064-0.071 x 0.107-0.114 mm. Mehlis' gland dorsal to ovary. Vitelline follicles transversely arranged, extending from level of anterior testis and filling up space behind posterior testis. Egg not seen.

Host: Little Chinese grebe, *Podiceps ruficollis poggei* (Reichenow).
Locality: Small intestine.

[continuation of TUNG-WU HSUEH-PAO Vol 23, No 1, Mar 77 pp 80-87]

Location: Suzhou, China.
Date: March, 1934.

This species closely resembles *P. (P.) aeratus* Oschmarin, *P. (P.) coronatus* Mendheim, and *P. (P.) exaeretus* Dietz, but is distinguished from *P. (P.) aeratus* in the body size, the ratio between oral sucker and pharynx, the size of the body spines and the position of the testes, and from *P. (P.) coronatus* by the position of the testes, the body width, the size of the pharynx and its host, and from *P. (P.) exaeretus* mainly by the number and arrangement of the collar spines, only 23 spines arranged in a single row and 3 corner spines on each side.

Petasiger (*Petasiger*) *tientsinensis* sp. nov. (fig. 3,4)

Body bottle-shaped, fairly small, 2.604-3.272 x 0.700-1.020 mm. Guticle smooth. Head collar reniform, 0.264-0.314 mm in width. Collar spines 27 in number, 4 spines on each corner, 0.062-0.08 x 0.018 mm, others arranged in two rows. 0.062-0.069 x 0.013-0.015 mm. Oral sucker terminal, nearly circular, 0.114-0.150 x 0.114-0.143 mm. Acetabulum central in position or slightly behind, nearly circular, 0.278-0.329 x 0.286-0.314 mm. Prepharynx 0.007-0.036 mm.

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Pharynx oblong, 0.171-0.200 x 0.086-0.114 mm. Oesophagus long, 0.500-0.814 mm, extending to anterior of acetabulum. Intestinal caeca extending almostly to posterior extremity.

Two testes tandem, situated in posterior half of body, between acetabulum and posterior extremity of body, smooth. Anterior testis oblong, 0.200-0.234 x 0.257-0.357 mm, posterior testis, 0.243-0.314 x 0.243-0.357 mm. Cirrus pouch large, lying anterior to acetabulum or on its anterior border, oval, 0.243-0.300 x 0.185-0.229 mm, enclosing an inversed gourd shaped, bipartite internal seminal vesicle. Genital pore behind intestinal fork.

Ovary located on right side, between acetabulum and anterior testis smooth, spherical or oblong 0.129-0.150 x 0.136-0.186 mm. Mehlis' glands well-developed, larger than ovary, and on left side of it is front of testis 0.143-0.200 x 0.171-0.214 mm. Vitelline follicles, spherical or oblong, 0.043-0.079 x 0.057-0.114 mm in size. Vitellaria extending from level behind intestinal fork to the posterior extremity of body. Uterus short, containing not more than 3 eggs. Eggs oblong, 0.087-0.093 x 0.067 mm.

Host: Little Chinese grebe, *Podiceps ruficollis poggei* (Reichenow).

[continuation of TUNG-WU HSUEH-PAO Vol 23, No 1, Mar 77 pp 80-87]

Locality: Small intestine.

Location: Tianjin, China.

Date: January 17, 1956.

This new species differs remarkably from the only other species of the subgenus, *P. (P.) exaeretus* Dietz, *P. (P.) hospitale* (Mendheim), *P. (P.) phalacrocoracis* (Yamaguti) and *P. (P.) baschkirovi* Ablassov et Iksanov by (1) the body larger, (2) oral sucker also larger, (3) the ratio between oral sucker and acetabulum smaller, being 2.3:1, (4) the anterior end of the Vitellaria in the level of the posterior border of the intestinal fork, (5) eggs larger in size 0.087-0.093 x 0.069 mm.

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TITLE: "Studies on the Life History of Fasciolopsis Buski (Lankester, 1857) With Consideration of Its Seasonal Infection in Pigs"

SOURCE: Peking TUNG-WU HSUEH-PAO [ACTA ZOOLOGICA SINICA] Vol 23, No 1, Mar 77 pp 88-96

TEXT OF ENGLISH ABSTRACT: Fasciolopsis buski (Lankester, 1857) is a common fluke parasite infecting pigs in Fujian Province. The larval stage of this parasite requires a higher temperature than that required by the other kinds of parasites. At room temperature of 28-32°C, miracidia hatch from eggs after being incubated for 16-18 days. Each miracidium possesses a pair of eyespots. Therefore when stimulated by light, miracidium emerges from the egg immediately. The emergence takes place mostly in the morning. The newly hatched miracidia generally swim in a straight line, when they come in contact with their intermediate hosts (*Hippeutis cantori* Benson), they immediately attack the heads

[continuation of TUNG-WU HSUEH-PAO Vol 23, No 1, Mar 77 pp 88-96]

or feet of their hosts and penetrate into tissues of the snails. From the host's tissue they migrate into the host's respiratory cavity, where they develop into sporocysts.

The early development of the sporocysts into embryonic rediae requires 12-15 days. The rediae escape from the sporocyst in 16-18 days. The first generation gives rise to daughter rediae in 28 days. We found that the first mature cercariae emerge from the infected snails in 45 days after infection. During the summer time, we find a few second-generation rediae produce cercariae and also a few daughter rediae. This cercariae-rediae intermixed method of reproduction is repeated in the following generations. In winter, when the weather is cold the daughter rediae stop to develop cercariae but produce rediae. They repeatedly develop rediae to rediae for several generations.

In examining the naturally infected snails (*H. cantori*), collected from ponds near the hogpen, we find that in Fu-zhou the mature cercariae first appear in September, and in Putian area in August. These results show that the parasite begin to infect pigs in August and September.

[continuation of TUNG-WU HSUEH-PAO Vol 23, No 1, Mar 77 pp 88-96]

In a survey of pig's helminths from the various slaughter houses in Fu-zhou, we find the first mature worms of *F. buski* in December, and in Putian area in November. According to previous investigations, it requires 2-3 months for this fluke to develop into mature worms in the pigs. This also suggests that the seasonal infection of this fluke in the pigs begins in August in Putian and September in Fu-zhou. Thus the best way to prevent the pigs from being infected by this parasite is to wipe out the snails before August and September.

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TITLE: "On Some Blood-Sucking Leeches From China"

SOURCE: Peking TUNG-WU HSUEH-PAO [ACTA ZOOLOGICA SINICA] Vol 23, No 1,
Mar 77 pp 102-108

TEXT OF ENGLISH ABSTRACT: In working with the blood-sucking leeches from South China, the writers have identified twelve species, among which five species are considered as new to science. The diagnoses of these new species are given below.

1. *Hirudo pulchra* Song, sp. nov. (Fig. 1)

Size large. 32-71 mm long and 5-10 mm wide, diameter of caudal sucker 3-6 mm. Body soft and flattened, attenuated anteriorly. It is less contractile than

[continuation of TUNG-WU HSUEH-PAO Vol 23, No 1, Mar 77 pp 102-108]

H. nipponia and incapable of assuming the form of an olive. Color of dorsum olive green, with three or five pale longitudinal stripes. Lateral margins of body yellow or orange. Venter purplish brown. 103 rings: Rings 97 and 98 are fused on the ventral side. Gonopores separated typically by five annuli, in the furrows 31/32 and 36/37 respectively. Testes eleven pairs.

Found in Ningbo, Zhejiang Province.

2. *Haemadipsa hainana* Song, Zhang et Tan, sp. nov. (Fig. 2)

Size large for the genus. 40-53 mm long and 5-6.5 mm wide, diameter of caudal sucker 5-6.5 mm. Extended specimens often attaining a length of 70 mm. The living color of medium dorsal field is reddish brown. In the middle of the field there are three lines, the median line of which extends nearly as long as body length. The lateral margins of median field irregular. Each lateral field marked with one to three figures of ellipses, which is enveloped by black pigments. Marginal stripes yellow. Venter usually with two marginal lines composed of black spots. Testes ten pairs. Sucker rays 72-73.

Found in Qionghai Xian and Tunchang Xian, Hainan Dao, Guangdong Province. It is a common land-leech in the rubber plantation of Hainan Dao.

[continuation of TUNG-WU HSUEH-PAO Vol 23, No 1, Mar 77 pp 102-108]

3. *Haemadipsa yanyuanensis* Liu et Song, sp. nov. (Fig. 3)

Size medium. 24-35 mm long and 3.3-4.7 mm wide, diameter of caudal sucker 4.3-5.2 mm. Median stripes of dorsum narrow. Between the median stripe and the submarginal one there are two series of broken stripes, the inner one composed of the spots on every second (b2) and third (a2) annulus of each somite, while the outer one of the spots on every fourth (b5), fifth (b6) and first (b1) annulus of two contiguous somites. The third and fourth pairs of eyes separated by well-developed areas. Gonopores in the furrows of rings 30/31 and 36/37. Testes ten pairs. Auricles distinct. Sucker rays 71-77.

Found in Yanyuan Yizu Zizhixian, Sichuan Province.

4. *Haemadipsa tianmushana* Song, sp. nov. (Fig. 4)

Size medium. 16-24 mm long and 2.5-5 mm wide, diameter of caudal sucker 2.5-5 mm. Color of dorsum in life orange or dark brown, no paler dorsal field or line, mottled with black on both faces. Marginal stripes yellow with a few small spots. The third and fourth eyes are usually intercalated by an area on one side, but they are on continuous annuli on the other side. No black

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pigments surrounding the metameric sensillae. Caudal sucker with 72-74 rays, prehensile papilla conspicuous.

Found in Tianmu Shan, Zhejiang Province.

5. *Haemadipsa gomolangma* Song et Jiang, sp. nov. (Fig. 5)

Size medium. 22-30 mm long and 4-6 mm wide, diameter of caudal sucker 5-6.5 mm. A median dorsal black stripe and supramarginal black stripes present. Marginal stripes pale yellow. Venter more reddish than the dorsal ground-color and usually immaculate. Third and fourth eyes separated by a quite complete transverse of sensory annuli small. Somite XXVII much reduced, fused partially or wholly with the preceding one. Caudal sucker with 73-76 rays, prehensile papilla not conspicuous. It is quite probable that the specimens collected by Hingston from the Himalayas in 1924 are of this species, which was mistaken for *H. montana* by Moore (1927).

Found in Myanang Xian, Qomolangma Feng Area, Xizang.

9129

CSO: 4009

GEOGRAPHICAL KNOWLEDGE

AUTHOR: None

ORG: Correspondence Section, Capital Iron and Steel Corporation

TITLE: "Capital Iron and Steel Corporation Is Marching Forward"

SOURCE: Peking TI-LI CHIH-SHIH [GEOGRAPHICAL KNOWLEDGE] No 1, Jan 77 pp 1-3

ABSTRACT: The Capital Iron and Steel Corporation has six subsidiary companies: the Shih-ching-shan Iron and Steel Company is in Peking's west suburb; the Special Steel Company and the Nonferrous Metal Company are dispersed in Peking's counties and districts; Ch'ien-an Pai-li Mine is a mining company along the banks of Luan River; and the First and Second Construction Company is in capital construction. In 1976 pig iron output was more than six times the total output over 30 years prior to Liberation and steel output more than 15 times the China-wide output in 1949. Compared to 1965, the increase in pig iron output was 55 percent, steel output climbed by threefold, and iron ore output by four and one half times. An initial rolling workshop was completed after nine months construction, so the corporation is now an integrated steel enterprise from ore to semifinished steel.

AUTHOR: None

ORG: Correspondence Section, Lung-ch'uan County

TITLE: "Lung-ch'uan Mineral Spring"

SOURCE: Peking TI-LI CHIH-SHIH [GEOGRAPHICAL KNOWLEDGE] No 1, Jan 77 p 3

ABSTRACT: Chu-chiang-ch'iao brand Lung-ch'uan mineral water is produced at the Lung-ch'uan Mineral Spring, located at Mei-tzu-k'eng, Lung-ch'uan County, Kwangtung Province. The bedrock is mainly Yenshan Age granite and its rift structure is quite developed. Intrusive quartzite veins become siliceous structural rock along the rift. The mineral spring emerges along the structural rock of the rift zone. The main components of the mineral spring are bicarbonate and sodium radicals as well as ionized carbon dioxide. This is the common soda water, basically similar to the world famous Vichy mineral water in France. The mineral water plant and a mineral spring sanitarium began to be built in 1965. More than 2000 patients sought treatment for skin disease and ulcers in the sanitarium.

AUTHOR: None

ORG: Propaganda Division of A-pa Tibetan Autonomous Chou Party Committee, Szechwan Province; and Department of Geography, Southwest Normal College

TITLE: "Today's Snowy Mountains and Steppes"

SOURCE: Peking TI-LI CHIH-SHIH [GEOGRAPHICAL KNOWLEDGE] No 1, Jan 77 pp 4-7, 9 & Front Cover

ABSTRACT: In northwestern Szechwan to the west of Min and Lung-men mountains, is the A-pa Tibetan Autonomous Chou, the so-called snowy mountains and steppes. The autonomous chou has a population of over 650,000 and covers more than 83,000 square kilometers. The northwestern part of the chou is a plateau with elevations higher than 3500 meters. There is no summertime in the plateau. The southwestern part is all high mountains and gorges, from 800 to 2500 meters at the bottom of gorges to more than 3500 meters at the peaks. In the gorges there is warm climate and abundant rainfall with widespread evergreen broadleaved trees. The world famous panda lives on the slopes of 2500 to 4100 meters elevation. In the steppes, sheep predominate among oxen and yaks. Swamps were drained to add 1,860,000 mou of grazing land. Forests cover 20 percent of the area with a timber reserve exceeding

[continuation of TI-LI CHIH-SHIH No 1, Jan 77 pp 4-7, 9 & Front Cover]

300 million cubic meters and the 1975 timber output was 1.5 million cubic meters. By late 1975, a total of 577 small hydroelectric power stations were built, generating a total of more than 17,000 kw. In the 13 counties of the chou, 3554 km of highways were built to connect all counties, over 90 percent of the wards, and over 75 percent of the communes. The cover photograph shows new buildings at Pa-hsi. Also included are five photographs and one map.

AUTHORS: SHEN Yu-ch'uan [3088 3768 3123]
HSI T'ien-ming [1598 1131 2494]

ORG: None

TITLE: "Nan-hu Lake"

SOURCE: TI-LI CHIH-SHIH [GEOGRAPHICAL KNOWLEDGE] No 1, Jan 77 pp 8-9

ABSTRACT: Nan-hu Lake lies south of Chia-hsing, Chekiang Province. This is where the First All-China Party Congress was held on 2 July 1921. A memorial boat rebuilt after the pattern of the one on which the party congress was convened is 16 meters long and 3 meters wide. At the center of the 360-mou lake is a small island, about a city square block in size, the site of the thousand-year-old Yen-yu Building. This is the setting of an ancient Chinese park, with numerous tall trees. Waterchestnuts grow near the bank. Included are a diagram and a map.

AUTHOR: WU Ming [0702 2494]

ORG: None

TITLE: "Chairman Hua's Heart-to-Heart Visit to the People in the South Liaoning Earthquake Zone"

SOURCE: Peking TI-LI CHIH-SHIH [GEOGRAPHICAL KNOWLEDGE] No 1, Jan 77 pp 10-11

ABSTRACT: This article records HUA KUO-FENG's [5478 0948 6912] visit to the Hai-ch'eng area after the 7.3-magnitude earthquake on 4 February 1975. At that time, Hua led a central government reassurance delegation to the quake area. Hua urged the people to cope with the earthquake by relying on Mao Tsetung thought in restoration. As a result, at Ying-k'ou and Hai-ch'eng mass earthquake surveying and prediction activities were much expanded with instruments measuring ground current, tilt, and angle of magnetic dip as well as observations of well water and domestic animals. One map in the article shows where the quake area is located.

AUTHORS: LI Shui-ch'i [2621 3055 3217]
WANG Yen-nien [3769 1693 1628]

ORG: None

TITLE: "Names of Tsangpo River"

SOURCE: Peking TI-LI CHIH-SHIH [GEOGRAPHICAL KNOWLEDGE] No 1, Jan 77
p 11

ABSTRACT: The complete name of the Tsangpo is Ya-lu-tsang-pu River. Among ancient Tibetans, it was called Yang-ch'a-pu Tsang-pu. Tsang-pu means "flowing water" and Yang-ch'a-pu means "from the highest peak." The river has three origins: the northern branch originates in the Gangdis Range and is called Ma-jung-tsang-pu; the middle branch is called Ch'ieh-ma-jung-tung; and the southern branch originates in the Himalaya Range and is K'u-pi-tsang-pu. Beyond the confluence of the three branches the river flows to Li-tzu; this section is the Ma-ch'uan River. West of La-tzu, the river is called Ta-cho-k'o-pu -- "water flowing out from a good horse." The river's name Ya-lung-tsang-pu is used in the Shan-nan area and the sound "lung" becomes "lu" in the Ch'u-shui area. The result is that the full name "Ya-lu-tsang-pu" is interpreted with the Tibetan sense: "river flowing through a valley."

AUTHOR: YANG Hsiang-hsien [2799 3276 6343]

ORG: None

TITLE: "Ch'uan-chou, an Ancient Culture City"

SOURCE: Peking TI-LI CHIH-SHIH [GEOGRAPHICAL KNOWLEDGE] No 1, Jan 77
pp 12-14, Back Cover and Inside Back Cover

ABSTRACT: Ch'uan-chou lies in southeastern Fukien, at the northern bank of the Chin River. This was an ancient port city of South China. However, before the Liberation the port deteriorated due to Amoy opening following the Opium War. Now the nearby Hou-chu Port has been rebuilt with breakwater facilities and large freighters sail along the coastal waters of Fukien and connect other Chinese ports. Since the completion of San-mei Water Reservoir with a capacity of nearly 400 million cubic meters, irrigated farmland at Ch'uan-chou grew by 45,000 mou. An overseas Chinese new village at the northern end of the urban Ch'uan-chou is a new residential area since numerous overseas Chinese visited the city. The back cover photograph shows the urban Ch'uan-chou with two pagodas dominating the skyline. One of five photographs in the inside back cover shows a transformer station in Ch'uan-chou plain. Also included are one map and one diagram in the text.

AUTHOR: P'AN Huan-mei [3382 3562 5019]

ORG: None

TITLE: "A Winter Variety of Litchi Chinensis"

SOURCE: Peking TI-LI CHIH-SHIH [GEOGRAPHICAL KNOWLEDGE] No 1, Jan 77
p 14

ABSTRACT: The common variety of Litchi chinensis matures in June or July but this winter variety matures in September or October in virgin forests of the high mountains in northern Kwangsi. The concentrated growing areas are the Yuan-pao, Ch'ing-lin and Chiu-wan mountains in Jung-shui County. The trees are ten to scores of ch'ih tall; they are nondeciduous. In color and shape, the fruits are identical to the common variety but have small kernels. Its seeds are rice grain-size. The juice is sweet and flavorful. The tree trunk is good quality timber, with tough and smooth wood grain so it is made into furniture that does not need painting.

AUTHORS:* LIU Shang-wu [0491 1424 2976]
CHANG Kai-tseng [1728 5556 2582]
P'AN Chin-t'ang [3382 6930 1016]
FENG Yen [7458 1750]

ORG: None

TITLE: "Pan-kung Lake"

SOURCE: Peking TI-LI CHIH-SHIH [GEOGRAPHICAL KNOWLEDGE] No 1, Jan 77
pp 15-16

ABSTRACT: Pan-kung Lake lies in the border between Kashmir and Tibet, mostly in China. The lake is surrounded by the Karakoram and Gangdis ranges. In July 1974 the author visited the lake on a scientific expedition in zoology and botany. Inside China, the lake water is fresh or semi-salty; it is potable. This is a 40-m deep structural lake because there are cliffs in the northern bank showing a large fault. Springs surface in a line along the fault. Fishes abound in the lake and there are several bird islands so their eggs are gathered in May and June. On the lakeside, highland barley and wheat are planted, with yields of 500 and 300 chin per mou. Cattle and sheep also graze there. The Sinkiang-Tibet Highway makes transportation easier in the lake area. Included are two photographs and one diagram.

AUTHOR: HO Chiang [0149 3068]

ORG: None

TITLE: "Rapids and Sand Banks Were Cleared to Form Navigation Channels"

SOURCE: Peking TI-LI CHIH-SHIH [GEOGRAPHICAL KNOWLEDGE] No 1, Jan 77
pp 17-18

ABSTRACT: Along the Yangtze River from Chungking to I-ch'ang, the river passes through the eastern Szechwan fold zone and the eastern margin of the basin. High mountains and hills on the bank restrict the river flow into many gorges. This article describes the regulation of river channels by dynamiting shoals and straightening channels. River regulation work done after the Liberation equals 100 times the total regulation over the past 120 years. Three photographs show the rocky banks and mid-river shoals prior to regulation. Also included is one diagram.

AUTHORS: (1) & (2) None
(3) WU Chin-hsiang [0702 6855 4382]
(4) & (5) None

ORG: (1) Propaganda Division, Kan-lo Municipal Party Committee
(2), (3), (4) & (5) None

TITLE: (1) "Kan-lo, A New City in Ta-liang Mountains"
(2) "Ch'a-erh-han Potassium Fertilizer Plant"
(3) "Two Ancient Shang Dynasty Wells Unearthed at T'ai-hsi Village, Kao-ch'eng County, Hopeh Province"
(4) "Pei-hai Fishing Port in Kwangsi"
(5) "New Construction in Lin-chiang Forest Area"

Source: Peking TI-LI CHIH-SHIH [GEOGRAPHICAL KNOWLEDGE] No 1, Jan 77 pp 19-20

ABSTRACT: These five articles are included in the column, "Various Areas in the Mother Country." Kan-lo City lies along the Chengtu-Kunming Railroad and a hydroelectric power station was built there in 1963. Since then, plants making cement, bricks, tiles, cooking pots and gypsum as well as those for printing and repairing agricultural implements were constructed. The Ch'a-erh-han potassium fertilizer plant is in the central Tsaidam Basin. The two ancient Shang Dynasty well unearthed are circular and oval in shape;

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this indicates groundwater was tapped 3000 years ago. The picture in the Pei-hai Fishing Port article shows a new fishing village. The photograph in the last article shows a 120-meter long railroad bridge with a net span of 75 meters and height of 27 meters. Included are five photographs, one to each article.

AUTHOR: CHAO Hsi-t'ao [6392 1585 3447]

ORG: None

TITLE: "Beach Rock, A Special Rock in Tropical Coasts"

SOURCE: Peking TI-LI CHIH-SHIH [GEOGRAPHICAL KNOWLEDGE] No 1, Jan 77
pp 30-31

ABSTRACT: Beach rock is sand and pebbles cemented by natural processes. These sands and pebbles may consist of marine biogenic bones, continental quartz, feldspar and debris or a combination of marine and continental sources as local geological and geomorphological conditions determine. A map shows the locations and stages of formation of beach rock along the South China coast. In given climate conditions and geomorphology, beach rock forms a particular sediment; this feature indicates the climatic change and interchange between sea and land. Also included are one diagram and one photograph.

[Footnote*: See correction in Authors on page 9 in Mar 77 issue]

AUTHOR: TSO Chung-mou [1563 0112 6180]

ORG: None

TITLE: "Land Reclamation of Seashore in Chekiang Province"

SOURCE: Peking TI-LI CHIH-SHIH [GEOGRAPHICAL KNOWLEDGE] No 2, Feb 77
pp 1-3 & 4

ABSTRACT: Reclaimable land on the Chekiang coasts above the low tide level totals about 2.4 million mou; most of the reclaimable land is at Hangchow Bay including the estuary of Ch'ien-t'ang River. Over the past six centuries, silted land in the estuary totalled 560 square kilometers. Between 1964, the year when the call "in agriculture, learn from Tachai" was declared, and 1975, reclaimed land along the Chekiang coasts amounted to more than 1.3 million mou. Besides building sea walls, the other factor in reclaiming land is desalinization by using fresh water. At present, cultivating can start the same year the sea wall is built and a year or two later a high yield can be expected. A canal is usually dug along the sea wall, utilizing excavated earth as the foundation. Later, the canal serves as a route in

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moving rubblestone to strengthen the sea wall. Hills sometime were levelled to collect stone. Included are two maps and one photograph.

AUTHOR: SHIH Hsin [0670 2450]

ORG: None

TITLE: "Kunming, City of Perpetual Spring"

SOURCE: Peking TI-LI CHIH-SHIH [GEOGRAPHICAL KNOWLEDGE] No 2, Feb 77
pp 4-6, Front Cover & Inside Front Cover

ABSTRACT: Kunming has a population of about 1.5 million and is 1895 meters above sea level. The climate is spring like year-round; its mean annual temperature is 15°C. All the county's chief towns, numbering about 120, in Yunnan Province connect to Kunming with highways; the total highway length is more than 40,000 km in the province. The Kunming Iron and Steel Mill has an annual output exceeding all of China before the Liberation; its daily output exceeds its pre-Liberation annual output. An overhead cable-way moves iron ores from more than 20 km away to feed blast furnaces. Kunming's machinery manufacturing industry developed greatly by producing precision machine tools, instruments, trucks, harvesting combines, tractors, generators, diesel engines, mining equipment and complete sets for synthetic ammonia plants. The front cover photograph shows Lung-men [Dragon Gate], some 300 meters above Tien-ch'ih Lake. Also included are six photographs (five of them appear in the inside front cover page) and one map.

AUTHOR: TENG Mei-ch'ing [6772 5019 2052]

ORG: None

TITLE: "Five Ranges"

SOURCE: Peking TI-LI CHIH-SHIH [GEOGRAPHICAL KNOWLEDGE] No 2, Feb 77
pp 7-9

ABSTRACT: This article describes five ranges separating the Yangtze Valley (in central China) from the Pearl River Valley (in southern China); the five ranges are Ta-yu-ling, Ch'i-t'ien-ling, Meng-chu-ling, Tu-p'ang-ling and Yueh-ch'eng-ling. Geomorphologically, the five ranges comprise northeast-southwest direction quaquaversal fault block mountains, together with foothills. Tungsten, lead and zinc ore deposits are important in the mountains as well as scattered coal deposits centered at Ch'en-lei coal field. The ranges act as a barrier to prevent the invasion of cold air currents from the north. The Red Army passed the area when the Long March began. Included is one map showing the locations of the five ranges.

AUTHOR: SHIH Ti-tso [0670 2769 4371]

ORG: None

TITLE: "A Tour of the Paracel Islands"

SOURCE: Peking TI-LI CHIH-SHIH [GEOGRAPHICAL KNOWLEDGE] No 2, Feb 77 pp 10-12, 21 & Back Cover

ABSTRACT: This is the first installment of the article. The Chinese name of the Paracel Islands is Hsi-sha [western sand] Islands; the western portion is the Yung-lo Islands and the eastern portion, the Hsuan-te Islands. There are a total of 26 islands and sand banks, as well as 11 submerged shoals and sands. Most of them are coral reefs and coral sandstone. The total land area of the Paracel Islands is less than 10 square kilometers; the Yung-hsing Island, shown in one of the back cover photographs, is the largest island -- 1.85 square kilometers. On larger islands, cattle and sheep graze and seagulls fly. Included are three diagrams, one map and five photographs; all photographs appear on the back cover.

AUTHOR: KUO Li-hsien [6753 4539 2009]

ORG: None

TITLE: "Timber Cutting in Hsing-an Range Forests"

SOURCE: Peking TI-LI CHIH-SHIH [GEOGRAPHICAL KNOWLEDGE] No 2, Feb 77 pp 13-14

ABSTRACT: The main peaks of the Hsing-an Range are the I-lei-hu-li Mountains in western Heilungkiang Province. Here grow Manchuria's sea of forests and some 80 girls from Shanghai and Hangchow area work there. Averaging 24 years of age, they handle engine-driven saws, trucks, winches, timber collecting as well as loading and unloading. They started working in September 1970 and within just 6 years they contributed more than 100,000 cubic meters of timber for the fatherland's construction. This is not an easy task since the high timber-cutting season is in winter because ice makes transportation easier. Often they work in severe cold as low as 30 to 40° below zero Celsius. Included are one diagram and one map.

AUTHOR: CHING Ts'ai-jui [2529 2088 3843]

ORG: None

TITLE: "Three High-Yield Harvests of Rape, Paddy Rice and Cotton in a Year"

SOURCE: Peking TI-LI CHIH-SHIH [GEOGRAPHICAL KNOWLEDGE] No 2, Feb 77 pp 15 & 9

ABSTRACT: This article reports on the T'ung-hsing production brigade agricultural institute in their successful cultivation of three high yields of rape, paddy rice and cotton in a single year. The brigade is part of the Yung-lung commune, Ching-shan County, Hupeh Province. The 1974 harvests included 176 chin of rape seed, 1102 chin of early rice and 132 chin of ginned cotton in a single mou. This is quite a feat since these three crops require more than 500 days of growth, if cultivated separately. How can this be done in a single year? The secret lies in transplanting and intercropping. By growing seedlings indoors, the entire growing season of 230 to 240 days can be fully utilized for three crops with proper intercropping.

AUTHOR: CH'EN Feng [7115 6912]

ORG: None

TITLE: "Cold Waves in South China"

SOURCE: Peking TI-LI CHIH-SHIH [GEOGRAPHICAL KNOWLEDGE] No 2, Feb 77 p 16

ABSTRACT: In winter, cold air builds up over the Arctic and Siberia; the southward movement of this cold air is called the cold-air current. At times, intensive cold currents are called a cold wave. In China, several mountain ranges act as barriers against the southward invasion of cold waves. The last of the barriers is the Nan-ling Mountains. The five ranges are described on pages 7-9 of this issue. However, an unusually strong cold wave can still climb over this barrier and reach the South China Sea. This phenomenon often shows up as the north wind during the Cold Dew Period [usually from 8 to 22 October] in South China. Thus, the not-yet-harvested late-ripening paddy rice will have more empty hulls. Even as south as Hainan Island cold waves in December and January will kill rubber tree seedlings and damage the bark of mature trees. Forecasting of cold waves and protection of crops receives much attention in South China, with the organizing of masses and professional personnel.

AUTHOR: CHANG Jung-ch'ang [1728 1369 2512]

ORG: None

TITLE: "Oxen in China"

SOURCE: Peking TI-LI CHIH-SHIH [GEOGRAPHICAL KNOWLEDGE] No 2, Feb 77 p 17

ABSTRACT: About 3000 years ago in China, oxen were domesticated mainly as a source of meat. Oxen used in plowing began probably 2500 years ago. By the time of Christ plowing with oxen gradually expanded in China southward from the Yellow River valley. Over the millennia three ox varieties developed: Mongolian ox, North China ox and South China ox. Distributed over northern North China, western Manchuria and northern and western Northwest China, the Mongolian ox is a small-build, tough animal with high resistance against diseases. Found north of the Yellow River, the North China ox is a large-build, good plowing ox. The South China ox has the smallest build among the three varieties yet it can endure the humid heat predominant in South China.

AUTHOR: TS'EN Shih-liang [1478 1102 5328]

ORG: None

TITLE: "Wen-chou Sweet Oranges Grow in Kweichow Province"

SOURCE: Peking TI-LI CHIH-SHIH [GEOGRAPHICAL KNOWLEDGE] No 2, Feb 77 p 17

ABSTRACT: The Wen-chou sweet orange tree ripens and bears fruit at an early age with high cold-resistance. The oranges are sweet and have no or few seeds. More than 1.2 million Wen-chou orange trees were planted in Kweichow Province, including Tsun-i Municipality. The highest yield per orange tree was more than 400 chin. In the province the area suitable for orange trees should have a mean January temperature of 3°C and a mean August temperature over 20°C. Generally, further to the western part of Kweichow Province the barrier function of Wu-meng and Ta-lou ranges is more pronounced. As a result, the temperature here is higher, accommodating trees planted at higher elevations. Further north, the tree-planting elevation should be lower but not where cold usually stays.

AUTHOR: (1) None
(2) LU Yun [6424 0061]

ORG: None

TITLE: (1) "Tachai Spirit in T'ao-yuan County"
(2) "Hsiang River Bridge Over Chu-tzu-chou Island"

SOURCE: Peking TI-LI CHIH-SHIH [GEOGRAPHICAL KNOWLEDGE] No 2, Feb 77 p 18

ABSTRACT: T'ao-yuan County is in northwestern Hunan Province; this is a hilly area and Yuan River flows through the county. The Tachai land reclamation movement swept the county; as a result, everyone in the county population of 860,000 has a mou of well irrigated and well drained field. Levelled fields totalled 130,000 mou and 700,000 mou of land was afforested. A Hsiang River bridge was built from Changsha to the west bank of the river. A mid-river island, Chu-tzu-chou, is under the mid-spans of the bridge, which is 1532 meters long and 20 meters wide. It can handle four lanes of traffic and 2000-ton steamships can negotiate the bridge even during a historically high flood. Included are two photographs.

AUTHOR: CHU Jui-chao [2612 3843 0340]

ORG: None

TITLE: "How Do Winds Vary With Altitudes?"

SOURCE: Peking TI-LI CHIH-SHIH [GEOGRAPHICAL KNOWLEDGE] No 2, Feb 77 pp 31 & 17

ABSTRACT: Wind speeds increase at high altitudes because frictional resistance by trees and structures is high near the ground. Generally, at an altitude of 1000 meters the influence of ground friction disappears. At that time the air flow is mainly determined by the barometric gradient at the particular altitude. The article presents a table listing increases of wind velocity over a sea, a plain, a small town and a large urban center; the lowest increase is over a sea and the highest -- over a large urban center. The wind direction also changes with altitude; over a land the change in wind direction is about 30° and over sea about 15°. In the northern latitudes, the wind direction is counterclockwise and in the southern latitudes, clockwise. Over a gorge, the lowest wind velocity appears half way up because the gorge effect at the bottom makes the wind velocity higher.

AUTHOR: WANG Chan-i [3769 1455 1942]

ORG: None

TITLE: "Bridges Over the Yellow River"

SOURCE: Peking TI-LI CHIH-SHIH [GEOGRAPHICAL KNOWLEDGE] No 3, Mar 77 pp 1-4

ABSTRACT: This article describes the more than 30 highway bridges over the Yellow River. Among them are stone arch bridges, hyperbola arch bridges, steel truss bridges, steel cable bridges and reinforced concrete girder bridges. Six highway bridges cross over the Yellow River in Tsinghai Province; they are Huang-ho-yen, Ta-jih, Lung-yang-hsia, Kuei-te, T'ung-jen and Hsun-hua bridges. As shown in a photograph, the Huang-ho-yen Bridge is 87 meters long and can handle two lanes of traffic. Downstream, from Kansu Province to Ch'ing-t'ung Gorge of Ningsia there are the P'ing-pao and Shih-ch'uan steel cable bridges. The former bridge is particularly noteworthy since its piers were built by peasants. From Inner Mongolia, the river flows through Shensi, Shansi and Honan provinces; there are Teng-k'ou, Hsia-ch'eng-wan, Pao-te, Wu-pao, Chun-tu, Ch'i-lang-wo and Loyang bridges. The Loyang Bridge is 3492 meters long and has 67 spans and 68 piers. The bridge is 11 meters wide, providing two lanes of motor traffic and two

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1 meter wide pedestrian paths. This is the longest highway bridge in China. The Chengchow Railroad Bridge was rebuilt to accommodate highway traffic. In the plain area, there are P'ing-yin and Pei-chen bridge; the last one is near the estuary. Included are four photographs and five diagrams.

AUTHOR: None

ORG: T'un-ch'ang County Revolutionary Committee; Department of Geography, Kwangtung Normal College

TITLE: "T'un-ch'ang County, an Advanced County Patterned After Tachai"

SOURCE: Peking TI-LI CHIH-SHIH [GEOGRAPHICAL KNOWLEDGE] No 3, Mar 77 pp 5-7 & Inside Front Cover

ABSTRACT: T'un-ch'ang County is in Hainan Island, with a population of 170,000 and an area of 1212 square kilometers. The area is in the foothills of Wu-chih Mountains with most elevations between 100 and 250 meters. Three crops of paddy rice can be harvested in a year and the 1975 rice harvest was 1000 chin per mou; the sugarcane output was 88,700,000 chin. These high yields are the result of building water reservoirs, constructing irrigation and drainage facilities, and levelling farmland. A synthetic ammonia plant with an annual output of 3000 tons was built in little over a year. In 1973, all production brigades were connected with highways and in 1975, 92 percent of the production teams were connected with highways. One map in the article shows the location of water reservoirs with capacities over one million cubic meters, hydroelectric power stations with 100 kw-plus capacity, canals, aqueducts, water turbine-pump stations, and electric pump stations.

AUTHOR: NONE

ORG: Chi-an County Revolutionary Committee

TITLE: "Pai-yun Mountains"

SOURCE: Peking TI-LI CHIH-SHIH [GEOGRAPHICAL KNOWLEDGE] No 3, Mar 77 pp 8-9

ABSTRACT: Most of the Pai-yun Mountains lie within Tung-ku commune, Chi-an County, Kiangsi Province. This is where Chairman Mao defeated the nationalists' attack in May 1931. By now, residents in Tung-ku commune have increased in number to more than 10,000 from about 4000 before the Liberation. The local products are grains, edible oil, timber, bamboo, tea, tobacco, sugarcane, melons and vegetables. Tungsten deposits are in the mountains and mining operations were developed. Other industrial plants include porcelain, boiler and farming implements and parts. After the farmland capital construction, 80 percent of the field are irrigated and drained. Included are two photographs, one map and one diagram.

AUTHOR: CHENG Ch'ang-su [6774 7022 5685]

ORG: None

TITLE: "Geological Expedition of Rivers and Lakes"

SOURCE: Peking TI-LI CHIH-SHIH [GEOGRAPHICAL KNOWLEDGE] No 3, Mar 77 pp 10-12 & 7

ABSTRACT: This is the author's report of a P'o-yang Lake recent geology expedition team organized by the Ta-ch'ing oil field and Kiangsu Institute of Geography in April 1976. At Hsing-tzu the lake narrows and water flows northward to the Yangtze River; the locale is on a graben fault zone. The block mountains at both sides are composed of the Panchi Group, ancient metamorphic rock system. Lu-shan Mountain is a block mountain. Most recent sediments are distributed in the valleys, lakeside and river banks. The recent sediments of P'o-yang Lake as well as the lakeside delta, rivers and other small lakes were studied in investigating the geological development history of P'o-yang Lake and vicinity since ancient lake sediments often contain abundant organic matter. It may be transformed into petroleum and coal. Every year, the Kan River empties 86.7 billion cubic meters of water into the lake and gigantic water resources and power potential can be

[continuation of TI-LI CHIH-SHIH No 3, Mar 77 pp 10-12 & 7]

exploited along the river. One of the expedition's main targets is studying recent sandstone in the lakeside delta. Included are one diagram and one map.

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ORG: None

TITLE: "A Tour of Paracel Islands"

SOURCE: Peking TI-LI CHIH-SHIH [GEOGRAPHICAL KNOWLEDGE] No 3, Mar 77 pp 13-15 & Back Cover

ABSTRACT: This is the second and last installment. The East Island is the second largest island of the group, 1.6 square kilometers in area. Plants cover 70 percent of the island and cattle, more than 200 of them, run wild. The top soil is guano phosphate calcareous humus and the groundwater is not potable. Coconut trees cover the central and western parts of the island. There is a water pond furnishing fresh water. As shown in three of the four back cover photographs, Ch'eng-hang Island is only 0.28 square kilometer. Three depressions on the small island were formed by land-locked lagoons. Throughout the Paracel Islands, since the Ming and Ch'ing dynasties Chinese fishermen have dug wells, built shelters and temples, planted trees and brought over grazing cattle and goats. Included are two diagrams.

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TITLE: (1) "P'u-lan County Is Modeled After Tachai Along the Banks of
 K'ung-ch'iao River"
 (2) "Ho-mien-shih Hydroelectric Power Station in Kwangsi"
 (3) "Camellia in Meng-chiang"

SOURCE: Peking TI-LI CHIH-SHIH [GEOGRAPHICAL KNOWLEDGE] No 3, Mar 77 pp 16-17

ABSTRACT: P'u-lan County lies in the southernmost part of A-li and in Southwest Tibet. The county is 20,000 square kilometers in area. The K'ung-ch'iao River traverses a valley of 3700-4000 meters in elevation as the main farming area of the county. A 27-li canal was built to channel the river water for irrigating over 2000 mou of farmland. In 1975 the mean grain yield of the county was 515 chin per mou. The Ho-mien-shih Hydroelectric Power Station is located at Hsin-tu, Ho-hsien County, Wu-chou District, Kwangsi along the middle section of the Ho River. This is a medium water conservation project benefiting power generation and navigation. The dam is 54 meters high

[continuation of TI-LI CHIH-SHIH No 3, Mar 77 pp 16-17]

and 193 meters wide across the river, with an annual mean flow rate of 200 cubic meters per second. The water reservoir has a capacity of 300 million cubic meters of water. It drives four turbine-generator sets generating 68,000 kw of power. Several 110-kv transmission lines connect with Wu-chou, Ho-hsien, Chung-shan and Fu-ch'uan. Every year, more than 100,000 tons of freight negotiate the site from onboard the ships. San-chiang County is the main producing area of camellia in Kwangsi; camellia harvested at Meng-chiang occupies more than 10 percent of the whole county. The camellia trees can live 200 to 300 years; the seeds contain 19 to 37 percent of oil. Included are five photographs.

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ORG: None

TITLE: "Talking About T'ang-shan Earthquake"

SOURCE: Peking TI-LI CHIH-SHIH [GEOGRAPHICAL KNOWLEDGE] No 3, Mar 77 pp 28-30.

ABSTRACT: The 7.8-magnitude T'ang-shan Quake occurred early in the morning on 28 July 1976. The article describes the relationship between earthquakes and geological structure in North China. From historical records, statistics on 70 more quakes since 1000 AD in North China are divided into four active periods; each active period had a peak stage when usually quakes of 8-magnitude or higher occurred. Now we are still in the fourth active period, starting in 1815. From these statistical records, the active periods become longer, quiet periods become shorter, major quakes become more and magnitudes are higher and higher down to the present time. The T'ang-shan area lies at the meeting place of Yin-shan--Yen-shan Rift Zone and the great Ts'ang-tung Rift Zone. However, earthquake prediction developed in China through the coordination of professional teams and mass movements. The 1975 Hai-ch'eng (in Liaoning

[continuation of TI-LI CHIH-SHIH No 3, Mar 77 pp 28-30]

Province) and the 1976 Sung-p'an--P'ing-wu (in Szechwan Province) quakes were successfully predicted. Included are one map and one table.

AUTHOR: SHEN Ming-hsing [3088 2494 1840]

ORG: None

TITLE: "Search of Groundwater Through Physical Prospecting"

SOURCE: Peking TI-LI CHIH-SHIH [GEOGRAPHICAL KNOWLEDGE] No 3, Mar 77 pp 31-32 & 30

ABSTRACT: Physical prospecting involves the use of instruments to measure physical fields (such as electric, magnetic and temperature fields) of rock strata to discriminate lithological characters for an understanding of geological structure and the distribution of ore bodies. This method has been more and more applied in investigating hydrological geology. Different rocks have different sizes of pores and different void ratios. Based on these differences, abundant groundwater can be found. The article goes on to describe the electric resistance method, magnetic method, gravity method and artificial seismic prospecting method for seeking groundwater. At present, the artificial seismic method provides the best results.

10424

CSO: 4009

CHINESE MEDICAL JOURNAL

AUTHOR: None

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TITLE: "Persist In Combined Traditional Chinese and Western Medicine in the Prevention and Treatment of Tumors"

SOURCE: Peking CHUNG-HUA I-HSUEH TSA-CHIH [CHINESE MEDICAL JOURNAL] No 3, 15 Mar 77 pp 136-139

ABSTRACT: The experiences of combined traditional Chinese and Western medicine in the prevention and treatment of tumors were reviewed. The concept of serving the people was considered of prime importance. It was also considered important to objectively evaluate Chinese herbal medicines that are effective in the treatment of tumors. Many are directly effective in tumor treatment, others are useful as adjuncts. Chinese herb medicines to 'support the positive and remove the evil' are considered important in tumor treatment. Western medicine usually attempts to eradicate the tumor by surgery, radiation and chemotherapy. These methods frequently also cause deterioration of one's general health due to side reactions. Chinese herbal medicines to 'support the positive' may be helpful, such as improving the

[continuation of CHUNG-HUA I-HSUEH TSA-CHIH No 3, 15 Mar 77 pp 136-139]

the appetite, decreasing gastrointestinal reactions and improving bone marrow function.

Dialectics and diagnosis should be coordinated in tumor treatment. Both traditional Chinese and Western medicine include diagnosis and classification of tumors. The treatment method may be chosen according to the pathological diagnosis, and general support and adjunctive treatment may be given according to traditional Chinese medicine classification. In carrying out radiotherapy and chemotherapy, herbal medicine may be used to decrease reactions and increase general resistance. Experience has shown that leucopenia and thrombocytopenia that appear during radiotherapy and chemotherapy may be corrected with herb medicine. The theoretical principles of combined traditional Chinese and Western medicine in the treatment of tumors should also be studied. Clinical results should also be studied with experimental research. From the many thousands of herb medicines that are supposed to be effective against tumors, experiments have proven that some may suppress tumor cells. When *Cicindela chinensis* was found clinically to be effective in the treatment of carcinoma, animal experiments were carried out on mice and the medicine was shown to suppress tumor cells.

[continuation of CHUNG-HUA I-HSUEH TSA-CHIH No 3, 15 Mar 77 pp 136-139]

It was considered important to direct the prevention and treatment of tumors by combined traditional Chinese and Western medicine with dialectical materialism. In the development of tumors, there are intrinsic and extrinsic factors, with intrinsic factors more important. Traditional Chinese medicine stresses the importance of 'support the positive'. At present radiotherapy, chemotherapy and surgery are used to attack the 'evil', and herb medicines are used to 'support the positive'. Experiences in the past few years show that combined traditional Chinese and Western medicine is the proper road for development of medicine in our nation.

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TITLE: "Pathological Study of the Excised Specimens of 405 Cases of Pulmonary Carcinoma"

SOURCE: Peking CHUNG-HUA I-HSUEH TSA-CHIH [CHINESE MEDICAL JOURNAL] No 3, 15 Mar 77 pp 140-145

ABSTRACT: Pathological studies were carried out on the excised specimens of 405 cases of pulmonary carcinoma. Localization of the tumors were the right upper lobe in 110 cases, left upper lobe in 101 cases, right lower lobe in 100 cases, left lower lobe in 61 cases, right mid lobe in 30 cases, and involvement of two lobes in 3 cases; 100 were central and 305 peripheral. According to the position, the relationship with the bronchi and the shape and size, 5 main types were classified. They were: intrabronchial type 17 cases (4.2%), bronchial wall type 86 cases (21.2%), globular type 203 cases (50.1%), massive type 98 cases (24.2%), and diffused type 1 case (0.7%). Histologically there were 4 types: squamous cell carcinoma 171 cases (42.2%), undifferentiated carcinoma 53 cases (13.1%), adenocarcinoma

[continuation of CHUNG-HUA I-HSUEH TSA-CHIH No 3, 15 Mar 77 pp 140-145]

172 cases (42.5%) and mixed carcinoma 9 cases (2.2%). It was found that most intrabronchial lesions were central types (14/17), over 50% of bronchial wall lesions were in the bronchial tree above the lobes, most of the globular and massive lesions were peripheral in location. Most of the intrabronchial and bronchial wall lesions were squamous cell carcinoma, most of the globular lesions were adenocarcinoma with a fair number of squamous cell carcinoma, in massive lesions there were slightly more squamous cell carcinoma than adenocarcinoma. In 171 cases of squamous cell carcinoma, 61 were central and 110 peripheral; in 53 cases of undifferentiated carcinoma, 18 were central and 35 peripheral; in 172 cases of adenocarcinoma, 20 were central and 152 peripheral; in 9 cases of mixed carcinoma, 1 was central and 8 peripheral.

Two year follow-up studies were obtained in 267 cases and five year follow-up studies in 200 cases. The relationship between pathology and prognosis was analyzed. The 2 year and 5 year survival rates for the whole group were 57.3% and 37.5%, for intrabronchial lesions 77.8% and 75%, for bronchial wall lesions 60.0% and 44.4%, for globular lesions 66.4% and 41.4%, for massive lesions 35.7% and 21.7%. The 2 year and 5 year survival rates for squamous cell carcinoma were 64.6% and 39.1%, for undifferentiated carcinoma

[continuation of CHUNG-HUA I-HSUEH TSA-CHIH No 3, 15 Mar 77 pp 140-145]

33.3% and 32%, for adenocarcinoma 57.9% and 36.9%, and for mixed carcinoma 50% and 50%. The 2 year and 5 year survival rates for peripheral lesions were 59.0% and 39.3%, for central lesions 50.0% and 32.0%. The survival rates for lesions below 3 cm. were 64.2% and 48.0%, for lesions 3-5 cm. 66.4% and 43.2%, for lesions larger than 5 cm. 40.2% and 23.2%. Whether cavitation has occurred did not seem to affect the prognosis. The presence of tumor emboli showed a poorer prognosis. Lymph gland metastases were found in order of frequency according to the pathology mixed carcinoma 50%, adenocarcinoma 45.6%, undifferentiated carcinoma 41.7% and squamous cell carcinoma 35.1%. The prognosis was poorer with lymph node metastases (44.8% and 23.4%) as compared with no metastases (67.7% and 52.7%). The survival rate was higher when there was increased lymphocytic reaction surrounding the lesion.

A brief discussion on the pathological classification of pulmonary carcinoma was given. Factors affecting the prognosis were also discussed, early diagnosis and early treatment, lymphocytic reaction surrounding the tumor and combined treatment were important factors mentioned. Emphasis was given to the significance of lymphocytic reaction surrounding the lesion.

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TITLE: "Surgical Treatment of Pulmonary Carcinoma in Old Age"

SOURCE: Peking CHUNG-HUA I-HSUEH TSA-CHIH [CHINESE MEDICAL JOURNAL] No 3,
15 Mar 77 pp 146-148

ABSTRACT: During 1957-1974, 326 patients over 60 years of age with pulmonary carcinoma were given surgical treatment, resection was performed in 309 cases (94.8%). There were 9 post-operative deaths. Among those who had resections, follow-up studies were carried out in 99.2%; the 1, 3 and 5 year survival rates were 68.1%, 56.0% and 40.7%. Among the 9 post-operative deaths, one was due to a psychiatric condition, four were due to cardiorespiratory failure and four were due to severe infection. Post-operative infection seemed to be the most important cause. Another 14 cases had severe postoperative complications, of which infection was the main cause. In 264 cases, the pre-operative EKG was normal in 150 and abnormal in 114. After proper pre-operative management, no cardiac failures occurred after operation. There were 55 cases of 5 year survival, 41 are still living and 14 had died. While 3 cases died of pulmonary and intrathoracic metastases, the main cause of death was cardiovascular diseases.

[continuation of CHUNG-HUA I-HSUEH TSA-CHIH No 3, 15 Mar 77 pp 146-148]

The resection rate, operative death rate and complication rate in this old age group were slightly better than the whole group of resection for pulmonary carcinoma in the hospital at the same period. Measures to improve the results of resection for pulmonary carcinoma in old age were discussed. The importance of pre-operative preparation of the respiratory and circulatory systems were stressed. Proper anesthesia was discussed and the importance of avoiding anoxia was stressed. Post-operative management was also briefly discussed.

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Peking Medical School

TITLE: "Study of Morphology That May Affect the Prognosis Factor of Mammary
Carcinoma I. Sinus Histiocytosis and Prognosis"

SOURCE: Peking CHUNG-HUA I-HSUEH TSA-CHIH [CHINESE MEDICAL JOURNAL] No 3,
15 Mar 77 pp 149-152

ABSTRACT: During 1949 to 1967, radical mastectomy was performed for mammary carcinoma in 125 patients. Follow-up studies were carried out for 5 years in 123 of 125 patients and 10 years for 94 of 97 patients. Excluding cases not suitable for analysis, the primary tumor and axillary gland specimens of 100 cases were reviewed, paying special attention to lymph gland sinus histiocytosis (S.H.), metastasis and the pathological type of the primary tumor. The S.H. reaction was classified into 4 degrees, depending on the extent of reaction. Pathologically the primary lesions were divided into typical and atypical types.

The 5 and 10 year survival rates for typical lesions were 94.3% and 74.1%, for atypical lesions 44.6% and 35.6%. The survival rates when there were

[continuation of CHUNG-HUA I-HSUEH TSA-CHIH No 3, 15 Mar 77 pp 149-152]

no metastases were 86.7% and 75%, with metastases they were 51.4% and 40.4%. Study of S.H. reaction showed that the stronger the S.H. reaction, the better the prognosis. Even in cases with lymph node metastases, the survival rate was higher in cases with stronger S.H. reactions. The study also showed that when S.H. reaction was weak, the lymph node metastasis rate was 82.2%, whereas when the S.H. reaction was strong the metastasis rate was 50%. In atypical lesions when the S.H. reaction was strong, the survival rate was 3-4 times higher than when the S.H. reaction was low. This relationship was not found in typical lesions.

Since some patients die after radical mastectomy when there is no lymph node metastasis and conversely many survive for 10 years when there are lymph node metastasis, factors other than metastasis may be important. Study for S.H. reaction show that this may be a factor. A study was carried out to determine the relationship between S.H. reaction and tumor immunology. In 30 cases of non-carcinomatous lesions, 65 adjacent lymph nodes were obtained for study. The S.H. reaction was 0.I degree in 63 and II degree in 2. This is in contrast to 20-40% S.H. strong reaction in mammary carcinoma. The reaction in other carcinomatous lesions (stomach, colon, esophagus, uterus) were also

[continuation of CHUNG-HUA I-HSUEH TSA-CHIH No 3, 15 Mar 77 pp 149-152]

much higher than non-carcinomatous lesions. So S.H. reaction may be considered a morphological manifestation of tumor immunology. Since there is the S.H. reaction factor that may affect the prognosis after radical mastectomy for mammary carcinoma, it was suggested to mobilize this factor in the treatment. Chinese herb medicines to 'support the positive' may serve this purpose. Medicines to increase reticuloendothelial function may also be useful.

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TITLE: "Preliminary Study of Drug Powder Extraction of Phytohemagglutinin"

SOURCE: Peking CHUNG-HUA I-HSUEH TSA-CHIH [CHINESE MEDICAL JOURNAL] No 3, 15 Mar 77 pp 153-154

ABSTRACT: Phytohemagglutinin (PHA) may activate T-lymphocytes in immunity reactions. The quality of PHA frequently affects the transformation of T-lymphocytes. A method of extraction and isolation of PHA from black beans was given in detail. A number of chemical experiments and biological experiments carried out with this product proved it to be of good quality. The importance of extracting products of high quality was discussed and the advantages of the present method were cited. The PHA extracted by this method not only may be used to determine the transformation rate of T-lymphocytes in the laboratory, but may also be given clinically as immunity treatment. Among patients given immunity lymphocyte treatment, PHA was given at the most 54 times with a total dosage of over 1,200 ml. without any untoward effects.

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TITLE: "Clinical X-ray Diagnosis of Gastric Malignant Lymphoma"

SOURCE: Peking CHUNG-HUA I-HSUEH TSA-CHIH [CHINESE MEDICAL JOURNAL] No 3, 15 Mar 77 pp 155-157

ABSTRACT: During 1957-1974, 16 cases of gastric malignant lymphoma were admitted for treatment. All diagnoses were confirmed by surgery and pathological examination. The lesions included lymphosarcoma 8, lymphoblastic sarcoma 1, reticulosarcoma 5, and Hodgkin's Disease 2. The symptoms and signs included epigastric and periumbilical pain 16, upper abdominal tenderness 14, acid eructation 9, anorexia 8, malnutrition and wasting 7, upper abdominal mass 6, hepatomegaly and splenomegaly 2, gastric perforation 1, and gastric hemorrhage 1. X-ray studies were carried out in 13 cases before surgery. The X-ray pre-operative diagnoses were gastric carcinoma 7,

[continuation of CHUNG-HUA I-HSUEH TSA-CHIH No 3, 15 Mar 77 pp 155-157]

malignant ulcer 2, malignant change in gastric ulcer 1, gastric carcinoma or sarcoma 1, gastric or colonic sarcoma 1, gastric perforation 1. Review of these X-ray studies showed the lesions mainly in the gastric antrum, sometimes involving the gastric body. All cases showed filling defects, with elliptical, semilunar and cauliflower multiple polyps or funnel shaped narrowing. Minute details were described.

The clinical characteristics and X-ray findings were correlated to attempt to establish a correct diagnosis. X-ray characteristics included infiltrative changes (2 cases), ulcer as the main manifestation (8 cases), intragastric mass (2 cases), and multiple polypoid changes (3 cases). The clinical characteristics included younger age; slow growth; general condition comparatively good, acid eructation more often than in gastric carcinoma; abdominal mass less frequently felt than gastric carcinoma, comparatively soft and ill demarcated. The prognosis of gastric malignant lymphoma is better than gastric carcinoma. Follow-up studies were carried out in 8 cases of this series, 3 are still living 3-10 years after operation.

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TITLE: "The Absorption, Distribution and Excretion of AT-1258"

SOURCE: Peking CHUNG-HUA I-HSUEH TSA-CHIH [CHINESE MEDICAL JOURNAL] No 3,
15 Mar 77 pp 158-160

ABSTRACT: AT-1258 is a new nitrogen mustard type of anti-tumor drug. Clinically it was found effective against pulmonary carcinoma, nasopharyngeal carcinoma, uterine cervical carcinoma, mammary carcinoma and cerebral tumors. The absorption, distribution and excretion of AT-1258 were studied with ^{14}C tagged isotopes in the ascitis carcinoma mice. AT-1258- ^{14}C was injected into or given orally to the mice and the animals were sacrificed at various intervals. Before sacrifice, blood, urine and feces specimens were collected. After sacrifice the different organs were analyzed for tagged ^{14}C . One hour after injection, it was found that distribution was highest in the kidneys, next in order the liver, tumor body, lungs, thymus, stomach, spleen, intestine, muscles, femur, and

[continuation of CHUNG-HUA I-HSUEH TSA-CHIH No 3, 15 Mar 77 pp 158-160]

brain. The serum concentration was second only to the kidneys, but blood cell concentration was low. After 4 hours most tissues showed lowering of concentration to about half. In mice given AT-1258 orally, serum concentration reached a height in 2 hours, excepting for higher concentration in the stomach and intestine, the distribution was the same as the injections. Generally the concentrations in oral administration were lower than with injections. The half life of AT-1258- ^{14}C in large rats were 13 ± 2.5 minutes, in rabbits 12 minutes. After 1-4 hours, AT-1258- ^{14}C was found rapidly excreted from the urine and bile. The 24 hour cumulative urinary excretion was 60%, in 72 hours it was 63.6%. The 24 hour excretion from the feces was 5%. The concentration of AT-1258 was found high in the tumor tissues of ascitis carcinoma mice, indicating this drug has an affinity to tumor cells. The concentration was also high in the lungs and thymus, which may indicate effectiveness against pulmonary carcinoma and lymphoma. The drug may also reach the brain and be effective against cerebral tumors.

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TITLE: "Report 4 Cases of Rhabdomyosarcoma of the Ear, Nasal Sinus and Throat"

SOURCE: Peking CHUNG-HUA I-HSUEH TSA-CHIH [CHINESE MEDICAL JOURNAL] No 3, 15 Mar 77 pp 161-162

ABSTRACT: Two cases of rhabdomyosarcoma of the ear, 1 each of the nasal sinus and throat were reported. All 4 cases died in a short time. Characteristics of rhabdomyosarcoma of the ear include young age; symptoms of polypoid growth in the ear canal, purulent discharge and nerve damage; rapid growth and destruction; local recurrence and metastasis; frequent incorrect diagnosis, difficult to radically excise; poor prognosis. Rhabdomyosarcoma of the nasal sinus and throat occur in older age, usually the mass causes functional disturbances, such as in the throat causing respiratory or swallowing difficulties.

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TITLE: "The Value of Vectocardiogram in the Diagnosis of Myocardial Infarction and Its Relationship to EKG"

SOURCE: Peking CHUNG-HUA I-HSUEH TSA-CHIH [CHINESE MEDICAL JOURNAL] No 3, 15 Mar 77 pp 163-167

ABSTRACT: The vectocardiogram (VCG) and EKG of 100 patients suffering from myocardial infarction were reviewed. The criteria for making a positive diagnosis from the EKG and VCG were given. The results showed that the VCG was positive in 99 cases and the EKG positive in 75 cases. The positions of the infarction as reflected by VCG and EKG were uniform in 55 cases. In a number of VCG which were positive, the EKG were negative. The position of the infarction was a factor in this difference. Thus the VCG and EKG findings were more uniform in lateral wall infarctions, but more negatives

[continuation of CHUNG-HUA I-HSUEH TSA-CHIH No 3, 15 Mar 77 pp 163-167]

were found in the EKG when the VCG was positive in posterior wall infarctions, anterior wall infarctions and lower wall infarctions in that order of frequency. Three illustrative cases were given where the EKG findings did not correspond to the VCG findings. The review showed that VCG is more sensitive than EKG in the diagnosis and localization of myocardial infarction. The literature was briefly reviewed and the results in this series were quite similar. The VCG and EKG of myocardial infarction of different localizations were briefly discussed.

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TITLE: "Clinical Analysis of 30 Cases of Sinoatrial Node Functional Failure"

SOURCE: Peking CHUNG-HUA I-HSUEH TSA-CHIH [CHINESE MEDICAL JOURNAL] No 3, 15 Mar 77 pp 168-170

ABSTRACT: Clinical analysis was made of 30 cases of sinoatrial node functional failure. According to the characteristics of arrhythmia, the cases were divided into persistent sinus bradycardia or sinus block 4 cases, and alternate tachycardia and bradycardia 26 cases. Each case had multiple EKG changes, the most common of which were irregular P wave, sinus bradycardia, sinus block, auricular flutter, auricular fibrillation, etc. Clinically 5 cases were diagnosed as coronary disease, 3 cases as myocarditis and 5 cases as myocardial disease. The diagnoses in the other cases were unknown. The main symptoms were dizziness, lassitude, impairment of memory, insomnia, thoracic oppression, paroxysmal palpitation, and bradycardia. There were fainting histories in 11 cases, Stoke-Adams Syndrome

[continuation of CHUNG-HUA I-HSUEH TSA-CHIH No 3, 15 Mar 77 pp 168-170]

in 3 cases, angina pectoris in 3 cases, mild heart failure in 2 cases, cerebral embolism in 1 case. Cardiac arrhythmia was the main physical finding, 9 cases also showed cardiac hypertrophy and 9 showed hypertension. Treatment was mainly to correct the bradycardia. Probanthine, atropine, isoproterenol and Chinese herb medicines were used. Artificial pacemakers were used in 2 patients. Follow-up studies 2-10 years showed 2 cases lost to follow-up, 2 cases died, the rest living and well. Discussion was made of the etiology, clinical manifestation, EKG characteristics, diagnosis and differential diagnosis, and treatment of this condition.

AUTHOR: None

ORG: Department of Pediatrics, Shanghai Children's Hospital

TITLE: "Clinical Analysis of 91 Cases of Hemolytic Disease of the Newborn"

SOURCE: Peking CHUNG-HUA I-HSUEH TSA-CHIH [CHINESE MEDICAL JOURNAL] No 3, 15 Mar 77 pp 171-174

ABSTRACT: Clinical analysis was made of 91 cases of hemolytic disease of the newborn treated during 1971-1974. There were Rh incompatibility in 10 and ABO incompatibility in 81. In Rh hemolysis jaundice usually occurred early, only one case in this group did jaundice occur after 48 hours. In ABO hemolysis jaundice occurred from the first to 6th day, with the peak on the third day. Jaundice was more severe in Rh hemolysis and anemia appeared early and was also more severe.

Complication of kernicterus was considered most dangerous and this was considered closely related to marked increase of serum bilirubin. According to the serum bilirubin level and clinical manifestation, a classification of 5 types was made: No kernicterus symptoms type 17 cases, serum bilirubin average 14.5 mg.%, prognosis good, all recovered; first stage kernicterus

[continuation of CHUNG-HUA I-HSUEH TSA-CHIH No 3, 15 Mar 77 pp 171-174]

type 7 cases, serum bilirubin average 24.1 mg.% and more severe symptoms, prognosis also good, all recovered; second stage kernicterus type 5 cases, serum bilirubin average 28.5 mg.% with severe neurological symptoms and signs, prognosis poor, may die of respiratory failure; 3d stage kernicterus 6 cases, serum bilirubin average 25.7 mg.% with neurological symptoms, prognosis good; kernicterus sequelae type 5 cases, serum bilirubin average 28.4 mg.%, all had residual symptoms after discharge.

Diagnosis was made on finding specific antibodies in the blood. In Rh hemolysis the diagnosis may be confirmed if specific immunity antibodies are found in the mother's blood corresponding to that of the newborn. In all 10 cases in this group these antibodies were found. In ABO hemolysis, requirements in a number of tests were mentioned to establish the diagnosis. Combined traditional Chinese and Western medicine treatment was carried out, using san huang decoction (herba artemisiae capillaris, rhubarb, radix coptidis, scutellaria baicalensis, evodia glouca, fructus gadeniae) treatment, the course was shorter than using steroids. The treatment was even better when san huang decoction and steroids were used in combination. Phototherapy was also used in a number of cases when the indirect serum

[continuation of CHUNG-HUA I-HSUEH TSA-CHIH No 3, 15 Mar 77 pp 171-174]

bilirubin was high (20-25 mg%). Exchange of blood was also carried out in 8 cases in Rh hemolysis and 9 cases of ABO hemolysis. In this group 8 patients died. Five were in kernicterus second stage on admission, exchange of blood was carried out in all except one, they died in 6-44 hours of respiratory failure. Three others were premature infants.

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TITLE: "Preliminary Report of Experiment With Rhododendron Molle G. Don. Smoke to Kill Rats"

SOURCE: Peking CHUNG-HUA I-HSUEH TSA-CHIH [CHINESE MEDICAL JOURNAL] No 3, 15 Mar 77 pp 175-176

ABSTRACT: Rhododendron molle was dried and made into powder. Potassium chlorate was added as a burning agent. It was packed with paper soaked and dried with the burning agent. In the fields, rat holes were blocked, leaving only one open. A roll of package was ignited and put into this hole which was then sealed. Using 4, 6, 8 and 10 gm per hole for 15 minutes, it was found that 4 gm was inadequate to kill rats, 6, 8 and 10 gm were all sufficient. The effect was best when the hole was less than 100 cm in length, it was less effective when the hole was over 200 cm in length. It was concluded that using 10 gm per hole for 30 minutes was most effective.

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TITLE: "Amniotic Membrane Filling, Iris Overlapping Shortening in the Treatment of Detachment of the Retina"

SOURCE: Peking CHUNG-HUA I-HSUEH TSA-CHIH [CHINESE MEDICAL JOURNAL] No 3, 15 Mar 77 pp 177-179

ABSTRACT: Shortening of the iris, filling with amniotic membrane and overlapping suture of the iris were performed 15 times for 14 patients with detachment of the retina. The amniotic membrane was obtained from healthy fresh placenta. The first post-operative fundus examination was done on the 4th day. In 12 cases the detached retina has already resumed normal position. Two others became normal on the 11th and 12th day. One case had recurrence of detachment, a second operation was performed 2 months later with recovery. The results showed all cases with the retina back in normal position, normal visual field and improvement of vision. Follow-up studied 3 months to over 1 year showed no recurrences.

AUTHOR: None

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TITLE: "Control Manure Prevent Diseases"

SOURCE: Peking CHUNG-HUA I-HSUEH TSA-CHIH [CHINESE MEDICAL JOURNAL] No 3, 15 Mar 77 pp 180-181

ABSTRACT: A latrine was constructed to prevent flies, prevent bad odor, prevent freezing, prevent leakage, become a safe cesspool for manure and easy to control. To prevent flies, the manure transporting tunnel was made deep, curving, dark, slanting and smooth. The squatting board was brought in from the edge to prevent maggot collection. The manure entrance was narrowed to minimize odor from the cesspool. Air vents protrude above the latrine from the cesspool. The three section cesspool was checked for leakage before use. The cesspool became safe especially when marsh gas was used to cause fermentation. Construction of and the principles to fulfill the requirements of a safe cesspool were given.

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TITLE: "Clinical Analysis of 24 Cases of Non-specific Mesenteric Abscess"

SOURCE: Peking CHUNG-HUA I-HSUEH TSA-CHIH [CHINESE MEDICAL JOURNAL] No 3, 15 Mar 77 pp 182-183

ABSTRACT: Twenty four cases of non-specific mesenteric abscess were admitted for treatment, the diagnoses were proven in all cases by operation. The main symptoms were chills, fever, headache and lassitude preceeding abdominal pain. A mass was felt in 16 cases. The abscess was localized in the jejunoilial junction in 15 cases, in the mid ilial portion in 8 cases and in the terminal ileum in 1 case. Culture of the abscess in 13 cases showed staphylococcus aureus in 9, B. coli in 2 and no growth in 2. All were insensitive to penicillin. The infection was considered hematogenous or enterogenous. The disease may occur as an acute form or a chronic form. The authors advocated incision and irrigation of the abscess cavity, leaving drainage tubes for post-operative irrigation.

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TITLE: "Syringoma -- Analysis of 8 Cases"

SOURCE: Peking CHUNG-HUA I-HSUEH TSA-CHIH [CHINESE MEDICAL JOURNAL] No 3,
15 Mar 77 pp 184-186

ABSTRACT: Eight cases of diffuse syringoma were analyzed. There were 7 females and 1 male, the age was 11-19 in 6 cases and 20-29 in 2, 3 patients had sisters with the same disease. The primary rash appeared on the eyelid in 6 cases, frontal orbit in 1 and the chest in 1. The rashes involved the orbit, forehead, temple, neck and chest in 6 cases, involved the axilla, abdominal wall, post auricle area and extremities in 2 cases. Some patients also had tinea infections elsewhere. Biopsy in all cases showed typical findings. It was pointed out this disease is usually confirmed to the adolescent period, more in females. The characteristics of the rashes and its distribution, and the diagnosis and differential diagnosis were discussed. Treatment consisted of CO₂ snow, electrolysis and electrocoagulation.

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TITLE: "Amniotic Fluid Embolism -- Report of Case"

SOURCE: Peking CHUNG-HUA I-HSUEH TSA-CHIH [CHINESE MEDICAL JOURNAL] No 3,
15 Mar 77 pp 187-191

ABSTRACT: A general review of amniotic fluid embolism was made. In China, since 1956 17 cases were reported with 4 survivals. Amniotic fluid embolism usually occurred during delivery or shortly after. Symptoms of shock rapidly occur. If the patient survives shock, then severe hemorrhage follows. The patient may die within a few minutes or a few days. Fetal death may be 43.3-67.0%. The causes include emergency delivery, abnormal strong uterine contraction, meconium in the amniotic fluid, intrauterine fetal death, premature separation of the placenta, ruptured uterus and Caesarean section. Opinions concerning the route of amniotic fluid entering into the mother's circulation vary, some think it enters through the veins of the endocervix, others believe it enters through the sinusoids of the placental attachments.

[continuation of CHUNG-HUA I-HSUEH TSA-CHIH No 3, 15 Mar 77 pp 187-191]

When amniotic fluid enters the mother's circulation, there may be obstruction of the pulmonary vessels leading to decreased blood return to the left heart and collapse of peripheral circulation, or there may be high pulmonary tension blocking blood from entering the right heart leading to right heart failure, or there may be microembolism in the pulmonary capillaries leading to blood and tissue anoxia. Bleeding occurs in about 40-45% of the cases. The main cause of bleeding is due to decrease of fibrinogen. Decrease of fibrinogen may be due to disseminated intravascular coagulation, secondary fibrinolysis activity, or heparin like anticoagulation material action. Gross pathology usually shows pulmonary edema, congestion or pulmonary bleb bleeding and enlargement of the right heart. The typical microscopic finding is pulmonary arteriole embolism. The diagnosis is made mainly on the clinical symptoms and signs. The principles of treatment include: Antishock measures; maintain cardiac and pulmonary functions, treatment of pulmonary edema and prevention of cardiac failure; correct blood coagulation mechanism; terminate pregnancy and release amniotic fluid. Details to carry out these principles were given.

A case was reported. A 38-year-old para 8 gravida 6 was admitted for delivery. During delivery she went into shock. A dead fetus was delivered

[continuation of CHUNG-HUA I-HSUEH TSA-CHIH No 3, 15 Mar 77 pp 187-191]

which could not be revived. Before and after delivery of the placenta there was vaginal bleeding of about 500 ml. Uterine contraction was good and there were no tears, but bleeding continued. Emergency treatment failed to revive the patient and she died about 14 hours after delivery. An autopsy was done and the diagnoses were: Amniotic fluid embolism, disseminated intravascular coagulation; pulmonary edema; hydrothorax. The diagnosis and treatment of this case were briefly discussed.

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TITLE: "Report Case of Successful Immediate Bone Graft For Traumatic Mandibular Bone Graft"

SOURCE: Peking CHUNG-HUA I-HSUEH TSA-CHIH [CHINESE MEDICAL JOURNAL] No 3,
15 Mar 77 p 148

ABSTRACT: A 20-year-old male was admitted with traumatic right facial soft tissue all layer laceration and mandibular fracture. The mandible was completely fractured and the two ends have approximated. The teeth were irregular and the mouth could not be closed. Under anesthesia the wound was debrided and the fracture reduced. A piece of bone about 3 cm. near the gum edge and 4 cm. at the lower edge was missing. A piece of bone was removed from the ileum and grafted between the fracture ends. Stainless steel wire was used for internal fixation. On the 14th post-operative day X-rays showed good position. Approximation of teeth was good. X-rays 1 and a half years later showed complete survival of the graft.

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TITLE: "The Action of Pyridoxine on Experimental Cardiac Arrhythmia"

SOURCE: Peking CHUNG-HUA I-HSUEH TSA-CHIH [CHINESE MEDICAL JOURNAL] No 3,
15 Mar 77 p 154

ABSTRACT: In 14 dogs ventricular fibrillation was produced as in previous methods. In 8 dogs as the control group, the left branch of the distal coronary branch was clamped with a hemostat, half minute later the EKG showed decreased ST wave, the postero-lateral wall of the left ventricle became cyanotic, 7 dogs died within 1-4 minutes in ventricular fibrillation. In another 6 dogs pyridoxine 50-100 mg/kg was given and 15 minutes later the above experiment was repeated. Observation for 20 minutes showed no dogs with ventricular fibrillation. After release of the coronary artery, 3 dogs died within half a minute of ventricular fibrillation.

[continuation of CHUNG-HUA I-HSUEH TSA-CHIH No 3, 15 Mar 77 p 154]

In 12 guinea pigs the heart was isolated in normal saline. In the control group aconite 2-4 μ g was injected, in 0.5-1 minute there was ventricular tachycardia, reaching 450-500 beats per minute persisting for 20-30 minutes. In the pyridoxine group after inducing tachycardia with the same method, pyridoxine 2.5-5 mg was injected, 0.5-1 minutes later the tachycardia disappeared. Repetition 6 times showed the same results.

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TITLE: "Report Case of Penile Base Foreign Body Strangulation"

SOURCE: Peking CHUNG-HUA I-HSUEH TSA-CHIH [CHINESE MEDICAL JOURNAL] No 3, 15 Mar 77 p 157

ABSTRACT: A 9-year-old boy put a bicycle axle ring over the base of his penis and went to bed. The next night there was strangulation, edema, pain and difficulty in urination. Hot compresses, lubrication, and attempt to saw it off all failed. A worker suggested hammering, because the axle ring is made of steel, is elastic and will break without changing shape after hammering. The soft tissue was protected with gauze and a steel plate was padded under the penis. After hammering the ring cracked and was removed.

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TITLE: "Temporary Gastric Inversion"

SOURCE: Peking CHUNG-HUA I-HSUEH TSA-CHIH [CHINESE MEDICAL JOURNAL] No 3,
15 Mar 77 p 160

ABSTRACT: A 24-year-old male was admitted because of hemorrhoids. Barium meal X-ray studies were made because of epigastric discomfort. The greater curvature was found on the right upper side and the lesser curvature on the left lower side. Reexamination after 15 minutes showed normal positions. One year later examination again showed inversion of the stomach which resumed normal position after a few minutes.

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TITLE: "Report Case of Extrophy of Bladder"

SOURCE: Peking CHUNG-HUA I-HSUEH TSA-CHIH [CHINESE MEDICAL JOURNAL] No 3,
15 Mar 77 p 179

ABSTRACT: A 5-year-old female was admitted with extrophy of the bladder presenting between the labia majora. The extrophy mass was 5X5X20 cm, the mucosa was congested and both ureteral openings could be seen. X-rays showed 4 cm separation of the symphysis pubis. Under anesthesia the sacroiliac joint on one side was freed to facilitate approximation of the symphysis pubis. Then a horse shoe shaped incision was made around the edge of the extrophied bladder, a mushroom catheter was placed in the bladder and the bladder wall sutured over the catheter down to the external urethra, creating a new urethral canal. The interpubis muscle was utilized to create a sphincter. The pubic bones were approximated with stainless steel wire. Seven months later the patient could control urination for 1-2 hours lying down, there was some incontinence while standing up.

AUTHOR: None

ORG: EENT Department, Chinese PLA No 161 Hospital

TITLE: "Report 90 Cases of Acute Tonsillitis Treated With Semen Plantago Major"

SOURCE: Peking CHUNG-HUA I-HSUEH TSA-CHIH [CHINESE MEDICAL JOURNAL] No 3, 15 Mar 77 p 186

ABSTRACT: Semen plantago major was used to treat 90 cases of acute tonsillitis. The herb was made into a decoction, taken 3 times per day, 5 days constitute a course. The results showed 83 cases cured and 7 improved. Fever subsided within 12 hours in 31 cases and within 72 hours in all cases. The WBC count returned to normal in 1-2 days. Local signs disappeared in 1-2 days in most cases. The bacteriology was briefly discussed. The advantages of using semen plantago major were given.

AUTHOR: None

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TITLE: "Traction Treatment for Cervical Vertebrae Disease"

SOURCE: Peking CHUNG-HUA I-HSUEH TSA-CHIH [CHINESE MEDICAL JOURNAL] No 3, 15 Mar 77 p 192

ABSTRACT: Analysis was made of 151 patients with cervical vertebrae diseases. The main symptoms were pain over the posterior cervical area, followed by numbness of the shoulders, arms, forearms and hands. Some developed muscular weakness or atrophy. In 131 cases with X-ray films, 111 showed hypertrophy of the cervical vertebrae, mostly C3-C7; 60 showed narrowing of the interspace. Traction in the sitting position with cloth tape was carried out in 121 cases, 1-3 times per day for 30-60 minutes, 10 days constitute a course. In most cases the symptoms were controlled in 1-2 months. X-ray films taken during traction with 5 kg and 10 kg of weight showed increase intervertebral distance, the more marked the heavier the weight. The mechanism of nerve pressure leading to symptoms and the action of traction giving relief was discussed.

AUTHOR: None

ORG: None

TITLE: "Epimedium Sagittatum Maxim Tablets"

SOURCE: Peking CHUNG-HUA I-HSUEH TSA-CHIH [CHINESE MEDICAL JOURNAL] No 3,
15 Mar 77 p 152

ABSTRACT: The tablet is made from the herb epimedium sagittatum, each tablet contains 0.25 gm. It is used mainly to treat chronic bronchitis. It is given 4-6 tablets 3 times per day, 10 days constitute a course. Three courses are given with 10 day intervals. This drug was used in the treatment of 182 cases of chronic bronchitis, the effective rate was 92.3%. Some patients may feel gastric discomfort, abdominal distension, dryness of the pharynx and thirsty. These reactions are mild and will decrease with continuation of the drug.

AUTHOR: None

ORG: None

TITLE: "Mo K'ang Tablet"

SOURCE: Peking CHUNG-HUA I-HSUEH TSA-CHIH [CHINESE MEDICAL JOURNAL] No 3,
15 Mar 77 p 162

ABSTRACT: Mo K'ang [9115 1660] tablet may be used in the treatment of atherosclerotic changes, hyperlipemia, hypercholesterol and hypertension. It is given 2 tablets 3 times per day. In over 200 cases of coronary heart disease treated at 7 units, the total effective rate was 87.5%. The triglycerides was lowered on an average of 40-50% and the cholesterol was lowered on an average of 30-35%. EKG exercise test showed improvement of coronary blood flow.

AUTHOR: None

ORG: None

TITLE: "Eczema Solution in the Treatment of Eczema"

SOURCE: Peking CHUNG-HUA I-HSUEH TSA-CHIH [CHINESE MEDICAL JOURNAL] No 3,
15 Mar 77 p 176

ABSTRACT: According to reports from the People's Hospital, Kwangsi T'ung Autonomous County, 'eczema solution' was used in the treatment of 50 cases of eczema. The lesions were mostly in the scrotum, next in the extremities. All were treated by washing with 'eczema solution', mild cases usually healed in 2-3 days, severe cases in 5-9 days. The contents of 'eczema solution' are dictamnus albus, catechu, dark plum, gallae japonicus, azadirachtae fructus, lithospermum officinale, evodia glouca, sophona flavescens, alumen.

AUTHOR: None

ORG: None

TITLE: "Shanghai Snake Medicine"

SOURCE: Peking CHUNG-HUA I-HSUEH TSA-CHIH [CHINESE MEDICAL JOURNAL] No 3,
15 Mar 77 p 183

ABSTRACT: Shanghai snake medicine includes Shanghai snake medicine tablet, Shanghai snake medicine No 1 injection and No 2 injection. They are made of herbal medicines, and have the actions of antivenom, antipyretic, anti-inflammation, cardiac stimulation and diuresis. They may also counteract hemolysis caused by snake bite. The tablets may be used alone, they are convenient to carry around. No 1 and No 2 injections are used together, their actions are fast and they are usually used for emergency treatment. They are given intramuscularly, if necessary intravenously. Clinical use in 2,165 cases in 60 units showed a cure rate of 99.7%. In one area, 75 cases were treated in 1971 with all recovered, 251 cases were treated in 1972 with all recovered, and 235 were treated in 1973 with 1 death. In another area 134 cases were treated and all recovered. In a third area 235 cases were treated with 1 death.

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